

Please replace paragraph [0103] as follows:

A2
[0103] To the first pressurizing chamber 26, there are connected through a fluid passage 42 two brake cylinders 44 of brakes 45 provided for braking two front wheels FL, FR of an automotive vehicle. To the second pressurizing chamber 28, there are connected through a fluid passage 46 two brake cylinders 48 of brakes 49 provided for braking two rear wheels RL, RR.

Please replace paragraph [0105] as follows:

B
C
[0105] Similarly, two fluid pressure control valve devices 74, 76 are provided for the respective rear wheel brake cylinders 48. These valve devices 74, 76 are identical with the valve devices 50, 52 provided for the front wheel brake cylinders 44. The rear wheel brake cylinders 48 are connected to another reservoir 56, which is connected through another pump passage 60 to another pump 62, which is driven by the pump motor 70. The pump passage 60 for the rear wheel brake cylinders 48 is also provided with check valves 64, 66 and damper 68. Thus, the rear brake-application sub-system for the rear wheels RL, RR is identical in construction with the front brake-application sub-system for the front wheels FL, FR.

Please replace paragraph [106] as follows:

A
[0106] The pump device 12 includes a pump 82 provided to pressurize the fluid received from a reservoir 80, and an electric motor 84 to drive the pump 82. The maximum delivery pressure and flow rate of the pump device 12 are determined by the capacities of the pump 82 and the pump motor 84. A check valve 85 is provided on the delivery side of the pump 82, to inhibit a flow of the fluid back into the pump 82. The hydraulic pressure control device 14 includes a linear valve 86, and a plurality of electromagnetic control valves 88, 90, 92. The linear valve 86 is capable of controlling a fluid pressure difference across this linear valve 86, according to an amount of electric current applied thereto.

Please replace paragraph [0123] as follows:

[0123] When the fluid pressure P_1 detected by the pressure sensor 162 has increased to the switching pressure P_{1S} , or when the operating force F_P of the brake pedal 24 has increased to the switching force F_{PS} , the electromagnetic shut-off valve 92 is switched to the open state, and the electromagnetic shut-off valve 90 is switched to the closed state. Namely, the hydraulic pressure control device 14 is placed in a second state indicated in Fig. 10. In this second state, the pressurized fluid is delivered from the pump device 12 to the pressurizing chamber 26 through the shut-off valves 88, 92 and the check valve 104. In the present embodiment, the linear valve 86 is controlled in the second state of the hydraulic pressure control device 14, such that the fluid pressure in the pressurizing chamber 26 is controlled as indicated by two-dot chain line in Fig. 4.

IN THE CLAIMS:

Please replace claims 1-11, 15 and 17 as follows:

1. (Amended) A braking system comprising:
a power-operated hydraulic pressure source operable to deliver a pressurized working fluid;
a brake including a hydraulically operated brake cylinder;
a manually operable brake operating member;
a master cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder and operable to deliver the pressurized working fluid into said brake cylinder, in response to an operation of said manually operable brake operating member; and
a flow-rate changing device disposed between said power-operated hydraulic pressure source and said brake cylinder and including said master cylinder, said flow-rate changing device being operable to change a rate of flow of the pressurized working

fluid from said master cylinder into said brake cylinder, which rate corresponds to a given rate at which the pressurized working fluid is delivered into said master cylinder as a result of an operation of said power-operated hydraulic pressure source.

2. (Amended) A braking system according to claim 1, wherein said master cylinder includes (a) a housing, and (b) a pressurizing piston fluid-tightly and slidably fitted in said housing, said pressurizing piston having two pressure-receiving surface areas which are different from each other and which respectively partially define a front pressurizing chamber and a rear pressure chamber on front and rear sides of said pressurizing piston, said master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to one of said front pressurizing chamber and said rear pressure chamber which has a smaller one of said two pressure-receiving surface areas, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to the other of said front pressurizing chamber and said rear pressure chamber.

3. (Amended) A braking system according to claim 2, wherein said flow-rate changing device further includes a discharge-flow inhibiting device operable to inhibit a discharge flow of the pressurized working fluid from said rear pressure chamber while the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said front pressurizing chamber under the control of said switching device.

4. (Amended) A braking system comprising:
a power-operated hydraulic pressure source operable to deliver a pressurized working fluid;

C/C
C/C

a brake including a hydraulically operated brake cylinder;
a hydraulic cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder, said hydraulic cylinder including (a) a housing, and (b) a pressurizing piston fluid-tightly and slidably fitted in said housing, said pressurizing piston having two pressure-receiving surface areas which are different from each other and which respectively partially define a front pressurizing chamber and a rear pressure chamber on front and rear sides of said pressurizing piston, said hydraulic cylinder being operable to supply said brake cylinder with the pressurized working fluid from said front pressurizing chamber as said pressurizing piston is advanced;

a flow-rate changing device disposed between said power-operated hydraulic pressure source and said brake cylinder and operable to change a rate of flow of the pressurized working fluid into said brake cylinder, which rate corresponds to a given rate at which the pressurized working fluid is delivered from said power-operated hydraulic pressure source,

said flow-rate changing device including a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to one of said front pressurizing chamber and said rear pressure chamber which has a smaller one of said two pressure-receiving surface areas, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to the other of said front pressurizing chamber and said rear pressure chamber,

said flow-rate changing device further including a discharge-flow inhibiting device operable to inhibit a discharge flow of the pressurized working fluid from said rear pressure chamber while the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said front pressurizing chamber under the control of said switching device; and

a check valve disposed in parallel connection with said discharge-flow inhibiting device, said check valve permitting a flow of the pressurized working fluid in a first direction from said power-operated hydraulic pressure source toward said rear pressure chamber, and inhibiting a flow of the pressurized working fluid in a second direction opposite to said first direction.

*C/C
C/C Control*

5. (Amended) A braking system according to claim 1, wherein said master cylinder includes (a) a housing, (b) a first pressurizing piston fluid-tightly and slidably fitted in said housing and operatively connected to said brake operating member, said first pressurizing piston partially defining a rear pressure chamber on a rear side thereof, and (c) a second pressurizing piston separate from said first pressurizing piston and partially defining a front pressurizing chamber on a front side thereof, said second pressurizing piston cooperating with said first pressurizing piston to partially define an intermediate fluid chamber therebetween, said master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said second pressurizing piston is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said rear pressure chamber, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said intermediate fluid chamber.

6. (Amended) A braking system according to claim 2, wherein said switching device includes a communication control valve device operable for selective fluid communication of said power-operated hydraulic pressure source with one of at least two fluid chambers of said master cylinder, said at least two fluid chambers including said front pressurizing chamber and said rear pressure chamber.

7. (Amended) A braking system according to claim 2, further comprising a pressure control device operable to control a pressure of the pressurized fluid in at least one of at least two fluid chambers of said master cylinder, on the basis of an operation-related amount representative of an operating state of said manually operable brake operating member, said at least two fluid chambers including said front pressurizing chamber and said rear pressure chamber.

8. (Amended) A braking system according to claim 1, further comprising a low-pressure source for storing the working fluid at a pressure substantially equal to an atmospheric level,

wherein said master cylinder includes (a) a housing, (b) a stepped pressurizing piston fluid-tightly and slidably fitted in said housing and including a small-diameter portion partially defining a front pressurizing chamber on a front side thereof, and a large-diameter portion having a larger diameter than said small-diameter portion and partially defining a rear pressure chamber on a rear side thereof, said large-diameter portion cooperating with an outer circumferential surface of said small-diameter portion to partially define an annular fluid chamber, said hydraulic cylinder being operable to supply said brake cylinder with the pressurized fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced,

and wherein said flow-rate changing device includes a communicating valve device operable while the pressurized fluid is delivered from said power-operated hydraulic pressure source to said rear pressure chamber, said communicating valve device having a first state for permitting a supply flow of the pressurized fluid from said annular fluid chamber to said brake cylinder, and a second state for permitting a discharge flow of the pressurized fluid from said annular fluid chamber to said low-pressure source, said communicating valve

device being switched from said first state to said second state while said pressurizing piston is advanced.

9. (Amended) A braking system according to claim 1, wherein said master cylinder includes (a) a housing, and (b) a pressuring piston fluid-tightly and slidably fitted in said housing and partially defining a front pressurizing chamber on a front side thereof, said pressurizing piston being advanced by the operation of said manually operable brake operating member, said master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced, said braking system further comprising:

a hydraulic booster operable to apply an assisting force based on a pressure of the pressurized working fluid received from said power-operated hydraulic pressure source; and

an assisting cylinder including a pressuring piston which partially defines a pressurizing chamber on a front side thereof and which is advanced by the pressurized working fluid received from said power-operated hydraulic pressure source, said assisting cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said pressurizing chamber thereof as said pressurizing piston thereof is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said hydraulic booster, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said assisting cylinder.

10. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into

said brake cylinder, on the basis of a pressure of the pressurized working fluid in said brake cylinder.

11. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder, on the basis of a rate of increase of a pressure of the pressurized working fluid in said brake cylinder.

15. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder on the basis of an operation-related amount of said manually operable brake operating member.

17. (Amended) A braking system according to claim 2, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder on the basis of a pressure of the pressurized working fluid in said front pressurizing chamber of said master cylinder.

REMARKS

Claims 1-29 are pending. By this Amendment, Figs. 1, 14, 17, 20, 23, 24, 30 and 32 are corrected pursuant to the attached Request for Approval of Drawing Corrections, the specification is amended, and claims 1-11, 15 and 17 are amended. Claims 5, 8, 9, 12-14 and 18-29 have previously been withdrawn from consideration. Reconsideration based on the above amendments and the following remarks is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten paragraph (37 C.F.R. §1.121(b)(1)(iii)) and claim (37 C.F.R. §1.121(c)(1)(ii)).

Applicant gratefully acknowledges that the Office Action indicates that claim 4 includes allowable subject matter. Claim 4 is rewritten in independent form to expedite prosecution of the above-identified application.

Claims 6, 7 and 17 are amended into agreement with amended claims 1 and 2, and claim 15 is amended into agreement with amended claim 1. Additionally, non-elected claims 5, 8 and 9 are amended into agreement with amended claim 1 so that these claims may be rejoined to independent claim 1 upon allowance.

I. The Drawings Satisfy All Formal Requirements

The Office Action objects to the drawings for not showing every feature of the invention. Figs. 1, 14, 17, 20, 23, 24, 30 and 32 are corrected by the attached approval of drawing corrections to obviate the objection. Specifically, the figures are corrected to denote front and rear brakes by respective reference numerals 45 and 49. Additionally, paragraph [0103] of the specification is updated to describe the front and rear brakes denoted by corresponding reference numbers 45 and 49. No new matter has been entered. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

II. The Specification Satisfies All Formal Requirements

The Office Action objects to the specification because of informalities. The specification is amended to obviate the objection according to the Examiner's suggestions. Additional corrections are also made to expedite prosecution of the present application.

Further, the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Office Action states that there is insufficient antecedent basis for "a communication control valve device," as recited in claim 6. This rejection is respectfully traversed.

It is respectfully asserted that paragraph [0030] in the specification provides sufficient antecedent basis for "a communication control valve device." Specifically, the specification describes the electromagnetic control valves 90, 92 which function as the communication control valve device recited in claim 6.

Accordingly, withdrawal of the objection to the specification is respectfully requested.

III. The Claims Satisfy All Formal Requirements

The Office Action objects to claims 1-4, 6, 7, 10, 11 and 15-17 due to informalities.

Claim 1 is amended to obviate the objection according to the Examiner's suggestion. In particular, a period is inserted following the word "source." Accordingly, withdrawal of the objection to the claims is respectfully requested.

IV. The Claims Satisfy The Requirements of 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 2-4, 6, 7, 10, 11 and 17 under 35 U.S.C. §112, second paragraph, as indefinite. Claims 2-4, 10 and 11 are amended to obviate the rejection. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

V. The Claims Define Allowable Subject Matter

The Office Action rejects claims 1-3, 6, 7, 10, 11 and 15-17 under 35 U.S.C. §102(b) as unpatentable over U.S. Patent No. 4,838,619 to Ocvirk ("Ocvirk"). The rejection is respectfully traversed.

Ocvirk shows a power-operated hydraulic pressure source (34-36), and a master cylinder (1) disposed between the hydraulic pressure source and a brake cylinder (17-20) and including a pressurizing piston (6,7) which is advanced by an operation of a manually operable brake operating member (3). However, this reference fails to teach a flow rate changing device as recited in claim 1.

In the braking system of Ocvirk, the pressure of the fluid pressurized by the pump 34 is controlled by a pressure control valve (36) on the basis of the fluid pressure in a control chamber (23) of the master cylinder, that is, on the basis of the operating force (F) acting on the brake operating member (3), i.e., "so as to safeguard the same proportionality to the actuating force exerted on the brake pedal 3" (column 6, lines 6-14). The pressure of the pressurized fluid flowing into the master cylinder (1) is changed by the pressure control valve

(36). However, the master cylinder (1) does not have a function of changing the rate of flow of the pressurized fluid from the master cylinder into the brake cylinder, when the rate of flow of the pressurized fluid from the hydraulic pressure course (34-36) into the master cylinder is at a given value, i.e., held constant at a certain value. In other words, the master cylinder in Ocvirk does not constitute any part of a flow-rate changing device as recited in claim 1.

For the above reasons, claim 1 is neither anticipated by, nor would have been obvious over, the disclosure in Ocvirk.

Dependent claims 2, 3, 6, 7, 10, 11 and 15-17 should be given additional patentable weight, owing to additional limitations recited therein. In particular, claim 2 recites a pressurizing chamber (26) and a rear pressure chamber (30) of the master cylinder (10), and a switching device (90, 92) operable to deliver the pressurized working fluid from the hydraulic pressure source selectively to one or the other of the pressurizing chamber and the rear pressure chamber. Ocvirk fails to teach the switching device as recited in claim 2, as discussed below.

In the braking system of Ocvirk, the motor 35 is started upon detection of a blocking tendency of a vehicle wheel by a brake slip control device (not shown), during a normal braking operation with an operation of the brake operating member (3), as described at column 5, lines 51-54, and the pressurized fluid delivered from the hydraulic pressure source (34-36) is supplied to the brake cylinder (17-20) through a supply tank (12), supply chambers (10, 11), central valves (8, 9) of master cylinder pistons (6, 7), and working chambers (4, 5), as described at column 5, lines 57-68. The working chambers (4, 5) correspond to the pressurizing chamber recited in claim 2. In the brake slip control in Ocvirk, however, the pressurized fluid cannot be delivered from the hydraulic pressure source into the control chamber (23) corresponding to the rear pressure chamber recited in claim 2, since the

pressure control chamber (23) is not communicated with the pump (34) through the pressure control valve (36), and a valve passage (32) provided between the supply chamber (11) and the pressure control chamber (23) is closed (column 6, lines 18-21) during the brake slip control, so that "the tandem master brake cylinder 1 is held in a read-for-operation condition safeguarding a safe actuation of the brake upon failure of the brake slip control device" (column 6, lines 25-29). Further, Ocvirk does not teach any means for preventing the pressurized fluid from being delivered into the working chambers.

For the above reasons, amended claim 2 and amended claims 3, 6 and 7 depending from claim 2, as well as claim 4, should be held allowable over Ocvirk.

Since amended claim 1 should be held allowable for the reasons discussed above, non-elected claims 5, 8, 9, and 12-14 depending from amended claim 1, as well as elected dependent claims 2, 3, 6, 7, 10, 11 and 15-17, should also be held allowable.

As pointed on in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim." Thus, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987)."

VI. The Non-Statutory Double Patenting Rejection

The Office Action rejects claim 1 under the judicially created doctrine of obviousness-type double patenting as unpatentable over claim 1 of co-pending U.S. Patent Application No. 09/712,124 (now U.S. Patent No. 6,412,882). This rejection is respectfully traversed.

The features recited in claim 1 would not have been obvious over claim 1 of U.S. Patent No. 6,412,882 ("the '882 Patent"). Specifically, claim 1 of the '882 Patent does not recite the flow-rate changing device recited in claim 1, which includes the master cylinder

and which is operable to change the rate of flow of the pressurized working fluid from the master cylinder into the brake cylinder, which rate corresponds to a given rate at which the pressurized working fluid is delivered into the master cylinder. Thus, the flow-rate changing device recited in claim 1 would not have been obvious over a combination of the master cylinder, hydraulic pressure source and first and second flow control devices recited in claim 1 of the '882 Patent.

Although claim 1 of the '882 Patent teaches that the recited first and second flow control device control the flows of the pressurized fluid from the hydraulic pressure source into the assisting chamber and the pressurizing chamber of the master cylinder, the claim never even remotely suggests a change of the flow rate of the fluid from the master cylinder into the wheel brake cylinder.

Further, claim 1 of the present application does not require first and second flow control devices as recited in claim 1 of the '882 Patent.

For the foregoing, reasons, claim 1 would not have been obvious over claim 1 of the '882 Patent. Accordingly, withdrawal of the rejection under the judicially created doctrine of obviousness-type double patenting is respectfully requested.

VII. Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-29 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Jeffery M. Lillywhite
Registration No. 53,220

JAO:JML/vgp

Attachments:

Appendix
Amendment Transmittal
Request for Approval of Drawing Corrections

Date: April 8, 2003

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

Changes to Specification:

The following is a marked-up version of the amended paragraphs:

[0101] In Fig. 1, reference signs 10, 12 and 14 denote a master cylinder, a pump device and a hydraulic pressure control device, respectively. These ~~master~~master cylinder 10, pump device 12 and hydraulic pressure control device 14 constitute a major portion of a hydraulic pressure source device 16. This hydraulic pressure source device 16 delivers a pressurized working fluid whose pressure has been controlled by the hydraulic pressure control device 14.

[0103] To the first pressurizing chamber 26, there are connected through a fluid passage 42 two brake cylinders ~~44~~of brakes 45 provided for braking two front wheels FL, FR of an automotive vehicle. To the second pressurizing chamber 28, there are connected through a fluid passage 46 two brake cylinders ~~48~~of brakes 49 provided for braking two rear wheels RL, RR.

[0105] Similarly, two fluid pressure control valve devices 74, 76 are provided for the respective rear wheel brake cylinders 48. These valve devices 74, 76 are identical with the valve devices 50, 52 provided for the front wheel brake cylinders 44. The rear wheel brake cylinders 48 are connected to another reservoir 56, which is connected through another pump passage ~~50-60~~ to another pump 62, which is driven by the pump motor 70. The pump passage 60 for the rear wheel brake cylinders 48 is also provided with check valves 64, 66 and damper 68. Thus, the rear brake-application sub-system for the rear wheels RL, RR is identical in construction with the front brake-application sub-system for the front wheels FL, FR.

[0106] The pump device 12 includes a pump 82 provided to pressurize the fluid received from a reservoir 80, and an electric motor 84 to drive the pump 82. The maximum

delivery pressure and flow rate of the pump device 12 are determined by the capacities of the pump 82 and the pump motor 84. A check valve 85 is provided on the delivery side of the pump 82, to inhibit a flow of the fluid back into the pump 82. The hydraulic pressure control device 14 includes a linear valve 86, and a plurality of electromagnetic control valves 86, 88, 90, 92. The linear valve 86 is capable of controlling a fluid pressure difference across this linear valve 86, according to an amount of electric current applied thereto.

[0123] When the fluid pressure P_1 detected by the pressure sensor 162 has increased to the switching pressure P_{1S} , or when the operating force F_P of the brake pedal 24 has increased to a the switching force F_{PS} , the electromagnetic shut-off valve 92 is switched to the open state, and the electromagnetic shut-off valve 90 valve 90 is switched to the closed state. Namely, the hydraulic pressure control device 14 is placed in a second state indicated in Fig. 10. In this second state, the pressurized fluid is delivered from the pump device 12 to the pressurizing chamber 26 through the shut-off valves 99 88, 92 and the check valve 104. In the present embodiment, the linear valve 86 is controlled in the second state of the hydraulic pressure control device 14, such that the fluid pressure in the pressurizing chamber 26 is controlled as indicated by two-dot chain line in Fig. 4.

Changes to Claims:

The following is a marked-up version of the amended claims:

1. (Amended) A braking system comprising:

a power-operated hydraulic pressure source operable to deliver a pressurized working fluid;

a brake including a hydraulically operated brake cylinder; and

a manually operable brake operating member;

a master cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder and operable to deliver the pressurized working fluid into said

brake cylinder, in response to an operation of said manually operable brake operating member; and

a flow-rate changing device disposed between said power-operated hydraulic pressure source and said brake cylinder and including said master cylinder, said flow-rate changing device being operable to change a rate of flow of the pressurized working fluid from said master cylinder into said brake cylinder, which rate corresponds to a given rate at which the pressurized working fluid is delivered from into said master cylinder as a result of an operation of said power-operated hydraulic pressure source.

2. (Amended) A braking system according to claim 1, further comprising a hydraulic cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder and including wherein said master cylinder includes (a) a housing, and (b) a pressurizing piston fluid-tightly and slidably fitted in said housing and, said pressurizing piston having two pressure-receiving surface areas which are different from each other and which respectively partially define a front pressurizing chamber and a rear pressure chamber on front and rear sides of said pressurizing piston, said hydraulic master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to one of said front pressurizing chamber and said rear pressure chamber which has a ^{NS} larger smaller one of said two pressure-receiving surface areas, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to the other of said front pressurizing chamber and said rear pressure chamber.

3. (Amended) A braking system according to claim 2, wherein said flow-rate changing device further includes a discharge-flow inhibiting device operable to inhibit a discharge flow of the pressurized working fluid from said rear pressure chamber while the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said front pressurizing chamber under the control of said switching device.

4. (Amended) A braking system according to claim 3, further comprising:

a power-operated hydraulic pressure source operable to deliver a pressurized working fluid;

a brake including a hydraulically operated brake cylinder;

a hydraulic cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder, said hydraulic cylinder including (a) a housing, and (b) a pressurizing piston fluid-tightly and slidably fitted in said housing, said pressurizing piston having two pressure-receiving surface areas which are different from each other and which respectively partially define a front pressurizing chamber and a rear pressure chamber on front and rear sides of said pressurizing piston, said hydraulic cylinder being operable to supply said brake cylinder with the pressurized working fluid from said front pressurizing chamber as said pressurizing piston is advanced;

a flow-rate changing device disposed between said power-operated hydraulic pressure source and said brake cylinder and operable to change a rate of flow of the pressurized working fluid into said brake cylinder, which rate corresponds to a given rate at which the pressurized working fluid is delivered from said power-operated hydraulic pressure source.

said flow-rate changing device including a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to one of said front pressurizing chamber and said rear pressure chamber

which has a smaller one of said two pressure-receiving surface areas, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to the other of said front pressurizing chamber and said rear pressure chamber,

said flow-rate changing device further including a discharge-flow inhibiting device operable to inhibit a discharge flow of the pressurized working fluid from said rear pressure chamber while the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said front pressurizing chamber under the control of said switching device; and

a check valve disposed in parallel connection with said discharge-flow inhibiting device, said check valve permitting a flow of the pressurized working fluid in a first direction from said power-operated hydraulic pressure source toward said rear pressure chamber, and inhibits inhibiting a flow of the pressurized working fluid in a second direction opposite to said first direction.

5. (Amended) A braking system according to claim 1, further comprising a manually operable brake operating member, and a hydraulic cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder, wherein said hydraulic master cylinder including includes (a) a housing, (b) a first pressurizing piston fluid-tightly and slidably fitted in said housing and operatively connected to said brake operating member, said first pressurizing piston partially defining a rear pressure chamber on a rear side thereof, and (c) a second pressurizing piston separate from said first pressurizing piston and partially defining a front pressurizing chamber on a front side thereof, said second pressurizing piston cooperating with said first pressurizing piston to partially define an intermediate fluid chamber therebetween, said hydraulic master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said second pressurizing piston is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said rear pressure chamber, and a second state in which

the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said intermediate fluid chamber.

6. (Amended) A braking system according to claim 2, wherein said switching device includes a communication control valve device operable for selective fluid communication of said power-operated hydraulic pressure source with one of at least two fluid chambers of said ~~hydraulic master~~ cylinder, said at least two fluid chambers including said front pressurizing chamber and said rear pressure chamber.

7. (Amended) A braking system according to claim 2, further comprising a pressure control device operable to control a pressure of the pressurized fluid in at least one of at least two fluid chambers of said ~~hydraulic chamber master cylinder~~, on the basis of an operation-related amount representative of an operating state of a said manually operable brake operating member, said at least two fluid chambers including said front pressurizing chamber and said rear pressure chamber.

8. (Amended) A braking system according to claim 1, further comprising:
—a low-pressure source for storing the working fluid at a pressure substantially equal to an atmospheric level;

wherein a hydraulic said master cylinder disposed between said power-operated hydraulic pressure source and said brake cylinder and including includes (a) a housing, (b) a stepped pressurizing piston fluid-tightly and slidably fitted in said housing and including a small-diameter portion partially defining a front pressurizing chamber on a front side thereof, and a large-diameter portion having a larger diameter than said small-diameter portion and partially defining a rear pressure chamber on a rear side thereof, said large-diameter portion cooperating with an outer circumferential surface of said small-diameter portion to partially define an annular fluid chamber, said hydraulic cylinder being operable to supply said brake cylinder with the pressurized fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced,

and wherein said flow-rate changing device includes a communicating valve device operable while the pressurized fluid is delivered from said power-operated hydraulic pressure source to said rear pressure chamber, said communicating valve device having a first state for permitting a supply flow of the pressurized fluid from said annular fluid chamber to said brake cylinder, and a second state for permitting a discharge flow of the pressurized fluid from said annular fluid chamber to said low-pressure source, said communicating valve

device being switched from said first state to said second state while said pressurizing piston is advanced.

9. (Amended) A braking system according to claim 1, further comprising:
a wherein said master cylinder including includes (a) a housing, and (b) a pressurizing piston fluid-tightly and slidably fitted in said housing and partially defining a front pressurizing chamber on a front side thereof, said pressurizing piston being advanced by an the operation of a said manually operable brake operating member, said master cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said front pressurizing chamber as said pressurizing piston is advanced; said braking system further comprising:

a hydraulic booster operable to apply an assisting force based on a pressure of the pressurized working fluid received from said power-operated hydraulic pressure source; and

an assisting cylinder including a pressurizing piston which partially defines a pressurizing chamber on a front side thereof and which is advanced by the pressurized working fluid received from said power-operated hydraulic pressure source, said assisting cylinder being operable to supply said brake cylinder with the pressurized working fluid delivered from said pressurizing chamber thereof as said pressurizing piston thereof is advanced,

and wherein said flow-rate changing device includes a switching device having a first state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said hydraulic booster, and a second state in which the pressurized working fluid is delivered from said power-operated hydraulic pressure source to said assisting cylinder.

10. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder, on the basis of a pressure of the pressurized working fluid in said brake cylinder.

11. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurizing pressurized

working fluid into said brake cylinder, on the basis of a rate of increase of a pressure of the pressurized working fluid in said brake cylinder.

15. (Amended) A braking system according to claim 1, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder on the basis of an operation-related amount of a said manually operable brake operating member.

17. (Amended) A braking system according to claim 2, wherein said flow-rate changing device is operable to change said rate of flow of the pressurized working fluid into said brake cylinder on the basis of a pressure of the pressurized working fluid in said front pressurizing chamber of said hydraulic master cylinder.